

WHAT IS CLAIMED IS:

1. A node (26) of a telecommunications network which prepares network system information for transmission across an air interface (32) to a user equipment unit (30), the system information including a system information block type which is included in protocol blocks, the protocol blocks being a system information block (112) and a referencing block (110), the protocol blocks in which the system information is included having a system information block type field which includes a system information block type value which corresponds to the system information block type, the system information block (112) comprising one or more segments (114), characterized in that the node (26) includes a system information extension utility function which is arranged to:

include a first system information block type extension indicator in the system information block type field (116) of the referencing block (110) when the system information block type for a system information block (112) referenced by the referencing block (110) does not have a system information block type value in a nominal range of system information block type values;

include a first system information block type extension field (120) in the referencing block (110);

include, in the first system information block type extension field (120), a system information block type extension value which indicates a system information block type for the system information block (112) referenced by the referencing block (110);

include a second system information block type extension indicator in the system information block type field (116) of a segment of the system information block (112) referenced by the referencing block (110).

2. The node (26) of claim 1, wherein the node system information extension utility function is further arranged to:

include a second system information block type extension field (122) in the segment of the system information block (112) referenced by the referencing block (110);

include in the second system information block type extension field (122) the system information block type extension value which indicates the system information

block type for the system information block (112) referenced by the referencing block (110).

3. The node (26) of claim 2, wherein the node system information extension utility function includes the second system information block type extension field (122) in a data field of the segment.

4. The node (26) of claim 3, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein the system information block type extension field occupies three bits of the data field of the segment.

5. The node (26) of claim 1, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein the referencing block (110) is a master information block, and wherein the system information block type field for the master information block is an "SIB and SB type" information element.

6. The node (26) of claim 1, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein the referencing block (110) is a scheduling block, and wherein the system information block type field for the scheduling information block is an "SIB type SIBS only" information element.

7. The node (26) of claim 1, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein in the system information block (112) the system information block type field includes a "SIB Type" information element.

8. A method of operating a node (26) of a telecommunications network which prepares network system information for transmission across an air interface (32) to a user equipment unit (30), the system information including a system information block type which is included in protocol blocks, the protocol blocks being a system information block (112) and a referencing block (110), the referencing block (110) being one or both of a master information block and a scheduling block, the protocol blocks in which the system information is included having a system information block type field which includes a system information block type value which corresponds to the system information block type, the system information block (112) comprising one or more segments, characterized in that the method comprises:

including a first system information block type extension indicator in the system information block type field of the referencing block (110) when the system information block type for a system information block (112) referenced by the referencing block (110) does not have a system information block type value in a
5 nominal range of system information block type values;

including a first system information block type extension field (120) in the referencing block (110);

including in the first system information block type extension field (120) a system information block type extension value which indicates a system information
10 block type for the system information block (112) referenced by the referencing block (110);

including a second system information block type extension indicator in the system information block type field (116) of a segment of the system information block (112) referenced by the referencing block (110).

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15 9. The node of claim 8, wherein the method further comprises:

including a second system information block type extension field (122) in the segment of the system information block (112) referenced by the referencing block (110);

including in the second system information block type extension field (122) the
20 system information block type extension value which indicates the system information block type for the system information block (112) referenced by the referencing block (110).

10. The method of claim 9, further comprising including the second system information block type extension field (122) in a data field of the segment.

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25 11. The method of claim 10, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein the system information block type extension field occupies three bits of the data field of the segment.

12. The method of claim 8, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, wherein the referencing block (110) is a master
30 information block, and wherein the system information block type field for the master information block is an "SIB and SB type" information element.

13. The method of claim 8, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, wherein the referencing block (110) is a scheduling block, and wherein the system information block type field for the scheduling
5 information block is an "SIB type SIBS only" information element.

14. The method of claim 8, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein in the system information block (112) the system information block type field includes a "SIB Type" information element.

15. A user equipment unit (30) which receives network system information
10 transmitted across an air interface (32) from a network node (26), the system information including a system information block type which is included in protocol blocks, the protocol blocks being a system information block (112) and a referencing block (110), the protocol blocks in which the system information is included having a system information block type field which includes a system information block type
15 value which corresponds to the system information block type, the system information block (112) comprising one or more segments, characterized in that the user equipment unit (30) includes a system information processing function which is arranged to:

recognize a first system information block type extension indicator in the system information block type field of the referencing block (110) when the system
20 information block type for a system information block (112) referenced by the referencing block (110) does not have a system information block type value in a nominal range of system information block type values;

locate a first system information block type extension field (120) in the referencing block (110);

25 obtain from the first system information block type extension field (120) a system information block type extension value which indicates a system information block type for the system information block (112) referenced by the referencing block (110);

30 recognize a second system information block type extension indicator in the system information block type field (116) of a segment of the system information block (112) referenced by the referencing block (110).

16. The user equipment unit (30) of claim 15, wherein the system information processing function is further arranged to:

locate a second system information block type extension field (122) in the segment of the system information block referenced by the referencing block (110);

5 obtain from the second system information block type extension field (122) the system information block type extension value which indicates the system information block type for the system information block (112) referenced by the referencing block (110).

17. A user equipment unit (30) which receives network system information
10 transmitted across an air interface (32) from a network node (26), the system information including a system information block type which is included in protocol blocks, the protocol blocks including a system information block (112), the protocol blocks in which the system information is included having a system information block type field which includes a system information block type value which corresponds to
15 the system information block type, the system information block (112) comprising one or more segments, characterized in that the user equipment unit (30) includes a system information processing function which is arranged to:

recognize a system information block type extension indicator in the system information block type field (116) of a segment of the system information block (112)
20 referenced by the referencing block (110);

locate a system information block type extension field (122) in the segment of the system information block referenced by the referencing block (110);

obtain from the system information block type extension field (122) the system information block type extension value which indicates the system information block
25 type for the system information block (112).

18. The user equipment unit (30) of claim 15 or claim 17, wherein the system information processing function obtains the second system information block type extension field (122) from a data field of the segment.

19. The user equipment unit (30) of claim 18, wherein the protocol blocks
30 belong to a Radio Resource Control (RRC) protocol, and wherein the system information block type extension field occupies three bits of the data field of the segment.

20. The user equipment unit (30) of claim 15, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, wherein the referencing block (110) is a master information block, and wherein the system information block type field for the master information block is an "SIB and SB type" information element.

21. The user equipment unit (30) of claim 15, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, wherein the referencing block (110) is a scheduling block, and wherein the system information block type field for the scheduling information block is an "SIB type SIBS only" information element.

22. The user equipment unit (30) of claim 15 or claim 17, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein in the system information block (112) the system information block type field includes a "SIB Type" information element.

23. A node (26) of a telecommunications network which prepares network system information for transmission across an air interface (32) to a user equipment unit (30), the system information including a system information block type which is included in protocol blocks, the protocol blocks being a system information block (112) and a referencing block (110), characterized in that the node (26) includes a system information extension utility function which is arranged to:

include, in a system information block type field (116) of a system information block (112) referenced by a referencing block (110), a system information block type value;

include in the referencing block (110) a code set identifier which identifies a selected one of plural code sets for use in interpreting the system information block type value included in the system information block type field (116) of the system information block (112) referenced by the referencing block (110).

24. The node (26) of claim 23, wherein
a first value for the code set identifier requires that the system information block type value be interpreted in accordance with a range of nominal system information block type values for a predetermined protocol; and
a second value for the code set identifier requires that the system information block type value be interpreted in accordance with a range of extended system

information block type values, the extended system information block type values being outside the range of nominal system information block type values.

25. The node (26) of claim 23, wherein the system information extension utility function is arranged to include the code set identifier in an extension field of the
5 referencing block (110).

26. The node (26) of claim 23, wherein the system information block (112) and the referencing block (110) are formatted in accordance with a predetermined protocol.

27. The node (26) of claim 26, wherein the predetermined protocol is a Radio Resource Control (RRC) protocol.

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28. The node (26) of claim 23, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein the referencing block (110) is a master information block, and wherein the system information block type field for the master information block is an "SIB and SB type" information element.

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29. The node (26) of claim 23, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein the referencing block (110) is a scheduling block, and wherein the system information block type field for the scheduling information block is an "SIB type SIBS only" information element.

30. The node (26) of claim 23, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein in the system information block (112)
20 the system information block type field includes a "SIB Type" information element.

31. A method of operating a telecommunications network which prepares network system information for transmission across an air interface (32) to a user equipment unit (30), the system information including a system information block type which is included in protocol blocks, the protocol blocks being a system information
25 block (112) and a referencing block (110), characterized in that the method comprises:
including, in a system information block type field (116) of a system information block (112) referenced by a referencing block (110), a system information block type value;

including in the referencing block (110) a code set identifier which identifies a selected one of plural code sets for use in interpreting the system information block type value included in the system information block type field (116) of the system information block (112) referenced by the referencing block (110).

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5 32. The method of claim 31, wherein

a first value for the code set identifier requires that the system information block type value be interpreted in accordance with a range of nominal system information block type values for a predetermined protocol; and

10 a second value for the code set identifier requires that the system information block type value be interpreted in accordance with a range of extended system information block type values, the extended system information block type values being outside the range of nominal system information block type values.

33. The method of claim 31, further comprising including the code set identifier in an extension field of the referencing block (110).

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15 34. The method of claim 31, further comprising formatting the system information block and the referencing block (110) in accordance with a predetermined protocol.

35. The method of claim 34, wherein the predetermined protocol is a Radio Resource Control (RRC) protocol.

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20 36. The method of claim 31, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein the referencing block (110) is a master information block, and wherein the system information block type field for the master information block is an "SIB and SB type" information element.

25 37. The method of claim 31, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein the referencing block (110) is a scheduling block, and wherein the system information block type field for the scheduling information block is an "SIB type SIBS only" information element.

38. The method of claim 31, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein in the system information block (112) the system information block type field includes a "SIB Type" information element.

39. A user equipment unit (30) which receives network system information
5 transmitted across an air interface (32) from a network node (26), the system information including a system information block type which is included in protocol blocks, the protocol blocks being a system information block (112) and a referencing block (110), characterized in that the user equipment unit (30) includes a system information processing function which is arranged to:
10 obtain, from a system information block type field (116) of a system information block (112) referenced by a referencing block (110), a system information block type value;
obtain, from the referencing block (110), a code set identifier which identifies a selected one of plural code sets;
15 use the selected one of the plural code sets for interpreting the system information block type value included in the system information block type field (116) of the system information block (112) referenced by the referencing block (110).

40. The user equipment unit (30) of claim 39, wherein
a first value for the code set identifier requires that the system information block
20 type value be interpreted in accordance with a range of nominal system information block type values for a predetermined protocol; and
a second value for the code set identifier requires that the system information block type value be interpreted in accordance with a range of extended system information block type values, the extended system information block type values being
25 outside the range of nominal system information block type values.

41. The user equipment unit (30) of claim 39, wherein the system information processing function is further arranged to obtain the code set identifier from an extension field of the referencing block (110).

42. The user equipment unit (30) of claim 39, wherein the system information
30 processing function is further arranged to deformat the system information block (112) and the referencing block (110) in accordance with a predetermined protocol.

43. The user equipment unit (30) of claim 42, wherein the predetermined protocol is a Radio Resource Control (RRC) protocol.

44. The user equipment unit (30) of claim 39, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein the referencing block
5 (110) is a master information block, and wherein the system information block type field for the master information block is an "SIB and SB type" information element.

45. The user equipment unit (30) of claim 39, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein the referencing block (110) is a scheduling block, and wherein the system information block type field for the
10 scheduling information block is an "SIB type SIBS only" information element.

46. The user equipment unit (30) of claim 39, wherein the protocol blocks belong to a Radio Resource Control (RRC) protocol, and wherein in the system information block (112) the system information block type field includes a "SIB Type" information element.